



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,355	05/01/2007	Ernest Giralt Lledo	ERA-105.0 (9704/98056)	6436
24628	7590	07/10/2009		
Husch Blackwell Sanders, LLP Husch Blackwell Sanders LLP Welsh & Katz 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606			EXAMINER LANDSMAN, ROBERT S	
			ART UNIT 1647	PAPER NUMBER
			MAIL DATE 07/10/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,355	Applicant(s) LLEDO ET AL.	
	Examiner Robert Landsman	Art Unit 1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Formal Matters

A. Claims 1-12 are pending and are the subject of this Office Action.

B. It is noted that SEQ ID NO:1-3 in claim 9 are drawn to a “Val-His” sequence instead of a “Val-Arg” sequence. These sequences are independent and distinct. SEQ ID NO:1-3 are not a species of SEQ ID NO:4-6, nor are they encompassed by the sequence of claim 1. Therefore, SEQ ID NO:1-3 are not being examined since they are drawn to a sequence distinct from that recited in claim 1.

2. Specification

A. The specification is objected to since the Brief Description of the Figures does not correspond to the panels in the actual Figures. In other words, the Brief Description of Figure 2 and 3 should be amended from “FIG 2 shows.” to, for example, “FIG 2A-B show”, or “FIG 2A and 2B show”. Figure 3 should be amended accordingly.

B. Though none could be found, Applicant is advised that embedded hyperlinks and/or other forms of browser-executable code are impermissible and require deletion. The attempt to incorporate subject matter into the patent application by reference to a hyperlink and/or other forms of browser-executable code is considered to be an improper incorporation by reference. See MPEP 608.01(p), paragraph I regarding incorporation by reference.

C. Though none could be found, trademarks should be capitalized wherever they appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

D. Though none could be found, any U.S. or Foreign Applications cited in the specification which have since issued should be updated with the corresponding Patent No.

Art Unit: 1647

3. Claim Objections

- A. Claim 10 is objected to since they phrase “cell penetrating” should be hyphenated.

4. Claim Rejections - 35 USC § 112, first paragraph – scope of enablement

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- A. Claim 1-6 and 10-12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the compound, Val-Arg-Leu-Pro-Pro-Pro, does not reasonably provide enablement for compounds of the sequence Val-Arg-Leu-Pro-Pro-Pro which has linkers ("L") and active moieties ("M"). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

In In re Wands, 8USPQ2d, 1400 (CAFC 1988) page 1404, the factors to be considered in determining whether a disclosure would require undue experimentation include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

Applicants have provided guidance and working examples that the compound, VRLPPP, is able to cross the cell membranes of HeLa cells. However, Applicants have not demonstrated that this compound comprising any linkers or moieties is able to cross cell membranes. Given the novel peptide structure of the claimed compound, it is not predictable that this compound would be taken up by cell membranes when it comprises substances (i.e. linkers and moieties) other than itself (i.e. VRLPPP).

These factors lead the Examiner to hold that undue experimentation is necessary to practice the invention as claimed.

It is noted that the instant claims recite that the peptide contains linkers and moieties. It is for this reason that they are being rejected under 35 USC 112, first paragraph. However, the peptide itself is known as discussed below under 35 USC 102 and reasons for using the peptide without linkers and moieties are also discussed under 35 USC 103. Therefore, both rejections under 35 USC 112, first paragraph as well as under 35 USC 103 are being made.

Art Unit: 1647

5. Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

A. Claims 1-5, 7, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kovalic et al. (U.S. Patent No. 7,214,786). The claims recite a peptide with the sequence, VRLPPP. Kovalic et al. teach this sequence (see below). The claims recite that "L" and "M" can be absent. Therefore, claims 2 and 3 are included since, regardless of what "L" and "M" are, if they are intended to be, if they are absent, then claims 2 and 3 read on only the peptide itself.

```
; Sequence 152598, Application US/10703032
; Patent No. 7214786
; FILE REFERENCE: 38-21(53374)B
; CURRENT APPLICATION NUMBER: US/10/703,032
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 10/020,338
; PRIOR FILING DATE: 2001-12-12
; NUMBER OF SEQ ID NOS: 211164
; SEQ ID NO 152598
; LENGTH: 86
; TYPE: PRT
; ORGANISM: Triticum aestivum
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(86)
; OTHER INFORMATION: unsure at all Xaa locations
; FEATURE:
; OTHER INFORMATION: Clone ID: PAT_TA_47016.pep
US-10-703-032-152598
```

```
Query Match          100.0%; Score 34; DB 3; Length 86;
Best Local Similarity 100.0%; Pred. No. 1.1e+02;
Matches      6; Conservative      0; Mismatches      0; Indels      0; Gaps      0;

Qy          1 VRLPPP 6
            |||||
Db          1 VRLPPP 6
```

Art Unit: 1647

B. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Dalcol et al. (J. Org. Chem. 1995). Though SEQ ID NO:1-3 of the instant invention have been withdrawn from consideration for the reasons provided above, in the event that Applicants argue that these sequences should be examined, it is noted that Dalcol et al. (discussed on page 2 of Applicants' specification) teach VHLPPP as a peptide in which this sequence is repeated up to at least 8 times. (Abstract and Introduction).

6. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. Claims 6, 8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovalic et al. (U.S. Patent No. 7,214,786) in view of Williamson (Biochem. J. 1994) and further in view of Dalcol et al. (J. Org. Chem. 1995). The claims recite the sequence VRLPPP wherein the sequence repeats as well as pharmaceutical compositions. Kovalic et al. teach VLRPPP as discussed in the above rejection under 35 USC 102. Kovalic et al. disclose this sequence in a patent pertaining to plants. Kovalic et al. do not teach that this sequence repeats. However, Dalcol et al. teach repeats of the peptide, VHRPPP as discussed in the above rejection under 35 USC 102. Dalcol et al. do not teach substituting L for H in the peptide. However, Williamson does teach that proline-rich peptides are abundant in the plant kingdom and, among other things, that various pro-rich peptides can be used in the saliva to precipitate toxic compounds, including plant phenols (page 250, right column and Figure 2).

Therefore, given the fact that VRLPPP was a known sequence (Kovalic et al.) and Dalcol et al. has made repeats of VHLPPP, which differs by only one residues, and the fact that peptides with pro-rich regions are pharmacologically useful, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to have used VRLPPP of various lengths for pharmaceutical compositions, which would include cosmetic compositions.

Under *KSR*, it's now apparent "obvious to try" may be an appropriate test in more situations than we previously contemplated. When there is motivation to solve a problem and there are a finite number of

Art Unit: 1647

identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try may show that it was obvious under § 103 (*KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, ___, 82 USPQ2d 1385, 1397 (2007)).

7. Conclusion

A. No claim is allowable.

Advisory information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Landsman, Ph.D. whose telephone number is (571) 272-0888. The examiner can normally be reached on M-F 10 AM – 6:30 PM (eastern).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on 571-272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Robert Landsman/
Primary Examiner, Art Unit 1647